



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/586,983

04/26/2007

Otto Schempp

2693.3017.001

2953

23399

7590

07/09/2008

REISING, ETHINGTON, BARNES, KISSELLE, P.C.

P O BOX 4390

TROY, MI 48099-4390

EXAMINER

ROJAS, OMAR R

ART UNIT

PAPER NUMBER

2874

MAIL DATE

DELIVERY MODE

07/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,983	Applicant(s) SCHEMPP ET AL.	
	Examiner OMAR ROJAS	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-50 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 49 and 50 is/are allowed.
- 6) ☒ Claim(s) 26-33, 35-41 and 44 is/are rejected.
- 7) ☒ Claim(s) 34, 42, 43 and 45-48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. With regards to the amendment filed on 03/26/2008, all the requested changes to the claims, drawing(s), and specification have been entered. Claim(s) 26-50 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 26 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

3. The drawings were received on 03/26/2008. These drawings are acceptable.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. **Claims 26-31, 33, 37, 38, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Patent No. 4,802,725 to Borne et al. ("Borne").**

In re claim 26, Borne discloses an optical connector (see Figures 2-4) for establishing a connection to a complementary mating connector **2** that has a complementary optical terminal element **3**, comprising:

a connector housing **10A/10B/10C** capable of mating connection with said complementary connector and including a mating receptacle **12A/12B/12C**, and
at least one optical terminal element including at least one fiber receiving sleeve **17A/17B/17C** that has a lower or front side and a top or rear side that are connected by walls

Art Unit: 2874

forming a channel which defines an optical axis and includes tongues or clamping elements

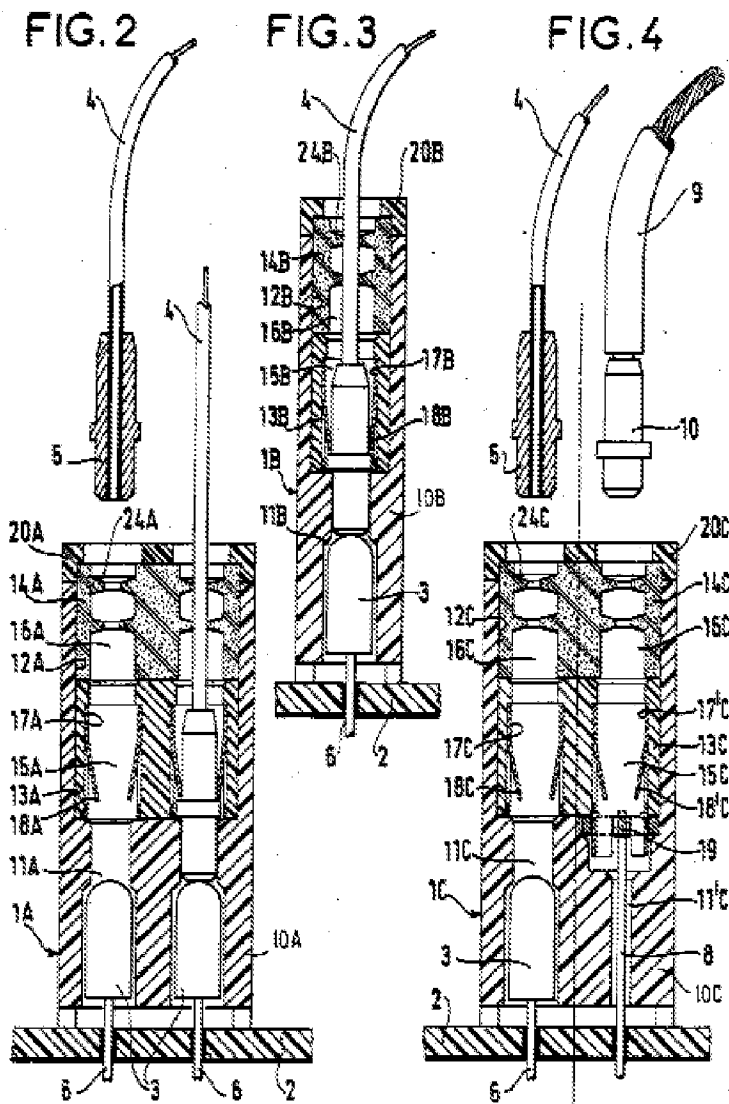
18A/18B/18C,

said optical terminal element capable of being adapted for mating connection with said complementary optical terminal element **3** of said complementary connector **2** and includes

at least one optical fiber section **4** having a front end **5** with a front optical contact surface and a rear end (i.e., the other end of optical fiber **4** not shown in the figures) with a rear optical contact surface, said optical fiber section **4** being affixed in said channel of said fiber receiving sleeve **17A/17B/17C** by means of said clamping elements **18A/18B/18C**, and being positioned to establish, with said front optical contact surface, an optical connection to said complementary optical element **3** of said complementary connector,

said front side of said fiber receiving sleeve **17A/17B/17C** being arranged adjacent to, and in the area of said front optical contact surface of said optical fiber section **4**, and

wherein said clamping elements **18A/18B/18C** define a narrowing opening in said channel of said fiber receiving sleeve **17A/17B/17C**, longitudinally spaced from said front side of said fiber receiving sleeve **17A/17B/17C** and arranged with a set-back relative to said front optical contact surface such that said front end **5** of said optical fiber section extends beyond said narrowing opening in said channel of said fiber receiving sleeve **17A/17B/17C** adjacent to said complementary optical terminal element **3** of said complementary connector. *See the entire Borne document for further details. Figures 2-4 of Borne are reproduced below.*



In re claims 27-29, 31, 33, 37, and 38, the particular limitations specified by these claims are clearly apparent from Figures 2-4 of Borne.

In re claim 30, the clamping elements **18A/18B/18C** of Borne are inherently capable of engaging said optical fiber section **4** and displacing and compressing said fiber section **4** because they appear to have the same physical structure as the claimed clamping elements.

Art Unit: 2874

In re claim 40, Borne's clamping elements **18A/18B/18C** could also be considered "engaging lugs" in a broad, literal sense because a "lug" can be defined simply as a projection used as a hold or support¹.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 32, 35, 36, 39, 41, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borne as applied to claims 26, 31, and 40 above.**

In re claim 32, Borne only differs in that he does teach that the front face of his clamping elements is offset relative to the front side of his sleeve by more 30 μ m and less than 5 mm.

However, changes in size have been held as obvious. In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. In the case at hand, the only difference between Borne and the invention of claim 32 is the relative offset between the front face of the clamping elements and the front side of the sleeve and there is no evidence that the claimed device would

¹ lug. Dictionary.com. *The American Heritage® Dictionary of the English Language, Fourth Edition*. Houghton Mifflin Company, 2004. <http://dictionary.reference.com/browse/lug>

perform differently from the Borne device. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention of claim 32 in view of Borne using the rationale provided by the *Gardner* court.

In re claims 35 and 36, Borne only differs in that he does not teach that his sleeve **17A/17B/17C** has an inner diameter of 40 μm smaller to 120 μm larger than the exterior of the optical fiber **4** and/or provides a radial clearance of 40 μm to 100 μm for the optical fiber. However, as seen in Figure 2 of Borne, the optical fiber **4** inherently requires some radial clearance between the sleeve **17A** in order to fit the terminal element **5** within the sleeve. Therefore, Borne's sleeve would certainly require a larger inner diameter than the exterior of the fiber **4** in order to accommodate terminal element **5**. An inner diameter of 40 μm smaller to 120 μm larger than the exterior of the optical fiber **4** or a radial clearance of 40 μm to 100 μm for the optical fiber would have been desirable in Borne in order to minimize the size of terminal element **5** and/or to provide a tight fit between the terminal element and the sleeve **17A**. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention of claims 35 and 36 in view of Borne.

In re claim 39, Borne only differs in that he teaches only two, instead of three, clamping elements arranged in each channel and evenly spaced around the circumference of each channel. However, duplication of parts has been held as obvious. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a

Art Unit: 2874

water seal of flexible material fills the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies in the joint, and a plurality of "ribs" projecting outwardly from each side of the web into one of the adjacent concrete slabs. The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.). In the case at hand, there appears to be no evidence that applicant's use of three clamping elements instead of two clamping elements produces any new or unexpected result. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention of claim 39 in view of Borne using the rationale provided by the *Harza* court.

In re claim 41, Borne only differs in that he does not teach that his clamping elements have a triangular cross section seen in radial direction onto the fiber section. However, changes in shape have been held as obvious. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.). In the case at hand, a triangular cross section defines a certain shape and there appears to be no evidence that the shape of the clamping elements is significant. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention of claim 41 in view of Borne using the rationale provided by the *Dailey* court.

In re claim 44, Borne only differs from the claim in that he does not teach at least one electro-optical converter including an optical input/output being located at said rear end of said optical fiber section and said rear optical contact surface of said fiber section providing an optical connection between said fiber section and said converter. However, Borne does disclose at least one electro-optical converter **3** including an optical input/output, said converter **3** being located at a front end of said optical fiber section **4** and the front optical contact surface of said fiber section providing an optical connection between said fiber section **4** and said converter **3**. It is well known that optical fiber transmission systems often connect both ends of the optical fiber to electro-optical converters in order to provide optical communication between a separate optical receiver and a separate optical transmitter. Accordingly, it would have been desirable to connect the rear end of Borne's optical fiber section **4** to another electro-optical converter in order to provide an optical communication system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claim 44 in view of Borne and well-known common knowledge in the art.

Allowable Subject Matter

8. Claims 49 and 50 allowed.
9. Claims 34, 42, 43, and 45-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 34, in the examiner's opinion, it would not have been obvious to modify Borne's sleeve to include a chamfer located between a front guide section and a rear

Art Unit: 2874

insertion section absent applicant's own teachings. With respect to claims 42 and 43, in the examiner's opinion, it would not have been obvious to modify Borne's clamping elements to have a ramp surface inclined to a rear end of the optical fiber that extends substantially perpendicularly to an optical axis of the optical terminal element absent applicant's own teachings. With respect to claims 45-48, in the examiner's opinion, it would not have been obvious to modify Borne to include the specified electro-optical converter at the rear end of the optical fiber (see base claim 44) and mounted by a bracket directly to a rear side of the connector housing as specified by base claim 45.

11. The following is an examiner's statement of reasons for allowance: With respect to claims 49 and 50, in the examiner's opinion, it would not have been obvious to modify Borne to position at least two electro-optical converters in the connector housing with each converter at the rear side of each sleeve whereby an optical connection is established through rear surfaces of the fiber sections as specified by independent claim 49.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (571) 272-2357. The examiner can normally be reached on Monday-Friday (9:00PM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick, can be reached on (571) 272-2344. The official facsimile number for regular and After Final communications is (571) 273-8300. The examiner's RightFAX number is (571) 273-2357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/586,983

Page 11

Art Unit: 2874

/HEMANG SANGHAVI/
Primary Examiner, Art Unit 2874

/Omar Rojas/
Patent Examiner, Art Unit 2874

or
July 9, 2008